

Notes on the Localities given in Longicornia Malayana, with an estimate of the comparative value of the collections made at each of them. By ALFRED R. WALLACE.

IN order that students of this work may not be misled by considering the materials on which it is founded to be more complete than they really are, especially as regards the geographical distribution of the species and the comparative richness or poverty of the several islands, I think it advisable to give a short sketch of each locality, an account of my opportunities for obtaining *Coleoptera*, and especially Longicorns, and an estimate of its probable richness compared with other districts in the Archipelago of nearly equal extent. I take the localities and islands in the order in which they are arranged in the foregoing tables.

Penang. The small collection from Penang consists of a few insects given me by Mr. Lamb on my way home, and of a few more collected by a native sent there by a friend. It gives no idea of the productions of the island, which, however, are probably not very numerous, as a large portion of it is more or less cultivated. The opposite coast of the Province of Wellesley has produced many fine and remarkable Longicorns, as may be seen by Mr. Pascoe's paper, published in the Proceedings of the Zoological Society for 1866.

Malacca, Mount Ophir. I spent about two months collecting in the interior of Malacca, ten days of which were passed at Mount Ophir; but I found no very good localities for insects, and accordingly devoted most of my time to Ornithology. Many parts of the country are covered with fine forests, and ought to be very productive if well worked under favourable conditions.

Singapore. My chief collecting ground was at Bukit-tima, a Roman Catholic Mission Station in the centre of the island. Here were several patches of forest on the tops of low hills, and on one of these, about a square mile in extent, I obtained nine-tenths of my Singapore collections. A few statistics of these may be interesting. The first day I went out, I captured eleven species of Longicorns; in a fortnight I had sixty species; in a month near 100 species, (besides 140 *Rhyncophora* out of

520 *Coleoptera*). I collected for about two months in Singapore, a week of which was spent at Pulo Ubim, on the northern side of the island, and a poor locality. That the collecting ground was not nearly exhausted is proved by the fact, that on going to the same spot again in 1856, I obtained in eighteen days eighteen new species of Longicorns. My success was due to several favourable circumstances. The patch of forest I collected in was on tolerably level ground, with a moist soil, the trees very lofty, with tolerably thick undergrowth; and it had been for some years frequented by Chinese wood-cutters, who had made numerous saw-pits, and had left the branches, and many of the trunks, lying about in every stage of decay. Food was thus furnished for a great variety of insects, and in a little more than two months I was able to collect about 700 species of *Coleoptera* (of which 135 were Longicorns) in a very limited area.

Sumatra. I spent a little more than two months in Sumatra, but it was the wet season, and I did not reach the finest country for insects in the valleys of the central range of mountains. My collections, therefore, give no adequate idea of the entomology of this great island, which I have every reason to believe is, at least, as productive of insect life as any other in the Archipelago.

Java. I spent two months in the Eastern part of Java (July to September, 1861), when it was excessively hot and dry, and scarcely any insects were to be found, and about six weeks in the Western part (September, October), when it was so exceedingly wet and gloomy as to be equally unfavourable for insect collecting. Under these circumstances, my time was chiefly devoted to birds, and the very few species of Longicorns I obtained must not be held to indicate any poverty in this luxuriant island, which, I believe, still offers a fine field to an energetic collector.

Borneo. I spent nearly fifteen months in Sarawak, but as I arrived at the beginning of the rainy season, the first six were very unproductive in insects, as were also the last four, which were spent in short voyages, or at the town of Sarawak. Almost all my insect collections were made at Simunjon, where some coal mines were being opened, and about fifty Chinamen and Dyaks were kept at work clearing forests, making roads, building houses, &c. I reached this spot on the 14th of April,

1855, and the next day commenced work. I rarely went more than a mile from the house, and I may safely say that nine-tenths of my insects were collected on a piece of ground about half a mile square. The following statement of the progress of my collections will show what a wonderfully rich spot this was.

1854. Nov. 1st to 1855,	Number of Species.		Remarks.
	Coleoptera.	Longicorns.	
Mar. 15...	320	34	About four months collecting, wet season.
April 15..	916	152	At Simunjon, hot sunshine with showers.
May 15 ..	1163	197	„ splendid weather.
June 15..	1293	226	„ very hot.
July 15 ..	1400	234	„ „
Aug. 15 ..	1550	248	„ hot and dry.
Sept. 15..	1700	268	„ „

During almost the whole month of July, I was confined to the house by a wound in my foot, and only obtained a few specimens from the Chinamen, and from my assistant, Mr. Allen, who was then very young and inexperienced. Almost the whole of the thirty-four species of Longicorns obtained before arriving at Simunjon, were found there also, so that I collected about 270 Longicorns in six months on a square mile of ground. A considerable number of these were single specimens, and even when several specimens were obtained, they were, in many cases, found only on one spot and on one occasion. This gives a kind of accidental character to a large part of the collection, and renders it probable that this limited tract was not even approximately exhausted. Until, therefore, other localities in Borneo are thoroughly worked under equally favourable circumstances, it is impossible to form any estimate of the total number of species of Longicorns which may exist in that vast island.

Macassar. Although I spent nearly seven months in Southern Celebes, I obtained few beetles, and especially few Longicorns. This is owing to the country being so very open and so much cultivated, and to the seasons being so extreme; for seven months excessive drought, and for five a deluge of water. The forests of the interior would, however, no doubt produce many fine new things.